

**The Status of
Telecommunications
Competition in California
2nd Report**

APPENDICES

A. Data Request Surveys

B. Data Request Respondents

C. Telecommunications Glossary

APPENDIX A.

CPUC Data Requests

- 1. Wireline Data Request #1**
- 2. Wireline Data Request #2**
- 3. Wireless Industry Data Request**
- 4. Cable Industry Data Request**
- 5. DSL Data Request**
- 6. Broadband Cost Data Request**

Wireline Data Request #1 (Sent To ILECs)

Please provide the following information.

I. Access Line, Subscribership and Revenue Data

A) Provide the following access line data in California:

	As of 6/30/01	As of 3/31/02
1) Total Number of Residential Access Lines		
1a) Facilities Based		
1b) UNE		
1c) Resale		
2) Total Number of Business Access Lines		
2a) Facilities Based		
2b) UNE		
2c) Resale		
3) Total Number of Other Access Lines ¹		
3a) Facilities Based		
3b) UNE		
3c) Resale		
	-----	-----
4) Total Number of Access Lines ²		
4a) Facilities Based		
4b) UNE		
4c) Resale		

¹ Other access lines include items that are neither residential nor business access lines, differentiate if applicable between Facilities Based, UNE, and Resale

² The total number of access lines is automatically calculated from the sum of residential access lines and business access lines your company enters above.

B) Provide the following intrastate revenue data for California:

	Jan. 1 - Dec. 31, 2000	Jan. 1 - Dec. 31, 2001	Jan. 1 - Mar. 31, 2002
Local, residential revenues ³			
Local, business revenues ³			
Residential, intraLATA toll revenues ⁴			
Business, intraLATA toll revenues ⁴			
Residential, interLATA toll revenues ⁵			
Business, interLATA toll revenues ⁵			
Access Revenues			
UNE Revenues ⁶			
Other revenues ⁷			
	-----	-----	-----
Total operating revenues ⁸			

³ For local, residential and local business revenues, please include revenues from basic service, directory assistance, and revenues from custom calling features and vertical services, such as voicemail, caller I.D., etc.

⁴ For residential intraLATA toll and business intraLATA toll revenues, please include revenues from presubscribed customers. These revenues should include any non-usage related charges (e.g. monthly plan fees) attributable to intrastate service. If the non-usage related charges apply to both intrastate and interstate services, include an appropriate allocation of these charges and explain what allocation method was used.

⁵ For residential interLATA toll and business interLATA toll revenues, please include revenues from presubscribed customers. These revenues should include any non-usage related charges (e.g. monthly plan fees) attributable to intrastate service. If the non-usage related charges apply to both intrastate and interstate services, include an appropriate allocation of these charges and explain what allocation method was used.

⁶ UNE revenues include revenues from ILECS, CLECS and DLECS/Data Service Providers ordering UNEs from your company.

⁷ Other revenues consists of items which are neither local, intraLATA toll, interLATA toll, access, nor UNE revenues. Please detail what items you have included in other revenues in item I.G below.

⁸ Total operating revenues will be calculated automatically by summing the local, intraLATA toll, interLATA toll, access, UNE, and other revenues that your company entered above.

II. ILEC -- Digital Subscriber Lines

	As of 6/30/01	As of 3/31/02
1) Total number of DSL lines provided by you or your affiliate ⁹		
2) UNE xDSL Loops		
3) Line Shared xDSL Loops		
	---	---

⁹ Total number of DSL lines includes both line sharing and UNE DSL lines

Wireline Data Request #2 (Sent To ILECs)

Please provide the following information.

I. Access Line, Subscribership and Revenue Data

A) Provide the following access line data in California:

	As of 6/30/02
1) Total Number of Residential Access Lines	
1a) Facilities Based	
1b) UNE	
1c) Resale	
2) Total Number of Business Access Lines	
2a) Facilities Based	
2b) UNE	
2c) Resale	
3) Total Number of Other Access Lines ¹	
3a) Facilities Based	
3b) UNE	
3c) Resale	
4) Total Number of Access Lines ²	-----
4a) Facilities Based	
4b) UNE	
4c) Resale	

¹ Other access lines include items that are neither residential nor business access lines, differentiate if applicable between Facilities Based, UNE, and Resale

² The total number of access lines is automatically calculated from the sum of residential access lines and business access lines your company enters above.

B) Provide the following intrastate revenue data for California:

	Jan. 1 - June 30, 2002
Local, residential revenues ³	
Local, business revenues ³	
Residential, intraLATA toll revenues ⁴	
Business, intraLATA toll revenues ⁴	
Residential, interLATA toll revenues ⁵	
Business, interLATA toll revenues ⁵	
Access Revenues	
UNE Revenues ⁶	
Other revenues ⁷	

Total operating revenues ⁸	

³ For local, residential and local business revenues, please include revenues from basic service, directory assistance, and revenues from custom calling features and vertical services, such as voicemail, caller I.D., etc.

⁴ For residential intraLATA toll and business intraLATA toll revenues, please include revenues from presubscribed customers. These revenues should include any non-usage related charges (e.g. monthly plan fees) attributable to intrastate service. If the non-usage related charges apply to both intrastate and interstate services, include an appropriate allocation of these charges and explain what allocation method was used.

⁵ For residential interLATA toll and business interLATA toll revenues, please include revenues from presubscribed customers. These revenues should include any non-usage related charges (e.g. monthly plan fees) attributable to intrastate service. If the non-usage related charges apply to both intrastate and interstate services, include an appropriate allocation of these charges and explain what allocation method was used.

⁶ UNE revenues include revenues from ILECS, CLECS and DLECS/Data Service Providers ordering UNEs from your company.

⁷ Other revenues consists of items which are neither local, intraLATA toll, interLATA toll, access, nor UNE revenues. Please detail what items you have included in other revenues in item I.G below.

⁸ Total operating revenues will be calculated automatically by summing the local, intraLATA toll, interLATA toll, access, UNE, and other revenues that your company entered above.

II. ILEC -- Digital Subscriber Lines

	Jan. 1 - June 30, 2002
1) Total number of DSL lines provided by you or your affiliate ⁹	
2) UNE xDSL Loops	
3) Line Shared xDSL Loops	

⁹ Total number of DSL lines includes both line sharing and UNE DSL lines

III. Company Contact Information

A) Please provide the following information of a staff person from your company who the CPUC can contact if there are any questions regarding the your response to this data request.

Company Name	
Contact Name	
Contact Address	
Contact Telephone Number	
Contact Email address	

Wireline Data Request #2 (Sent To CLECs)

Please provide the following information.

I. Access Line, Subscribership and Revenue Data

A) Provide the following access line data in California:

	As of 6/30/02
1) Total Number of Residential Access Lines	
1a) Facilities Based	
1b) UNE	
1c) Resale	
2) Total Number of Business Access Lines	
2a) Facilities Based	
2b) UNE	
2c) Resale	
3) Total Number of Other Access Lines ¹	
3a) Facilities Based	
3b) UNE	
3c) Resale	

4) Total Number of Access Lines ²	
4a) Facilities Based	
4b) UNE	
4c) Resale	

¹ Other access lines include items that are neither residential nor business access lines, differentiate if applicable between Facilities Based, UNE, and Resale

² The total number of access lines is automatically calculated from the sum of residential access lines and business access lines your company enters above.

B) Provide the following intrastate revenue data for California:

	Jan. 1 - June 30, 2002
Local, residential revenues ³	
Local, business revenues ³	
Residential, intraLATA toll revenues ⁴	
Business, intraLATA toll revenues ⁴	
Residential, interLATA toll revenues ⁵	
Business, interLATA toll revenues ⁵	
Access Revenues	
UNE Revenues ⁶	
Other revenues ⁷	

Total operating revenues ⁸	

³ For local, residential and local business revenues, please include revenues from basic service, directory assistance, and revenues from custom calling features and vertical services, such as voicemail, caller I.D., etc.

⁴ For residential intraLATA toll and business intraLATA toll revenues, please include revenues from presubscribed customers. These revenues should include any non-usage related charges (e.g. monthly plan fees) attributable to intrastate service. If the non-usage related charges apply to both intrastate and interstate services, include an appropriate allocation of these charges and explain what allocation method was used.

⁵ For residential interLATA toll and business interLATA toll revenues, please include revenues from presubscribed customers. These revenues should include any non-usage related charges (e.g. monthly plan fees) attributable to intrastate service. If the non-usage related charges apply to both intrastate and interstate services, include an appropriate allocation of these charges and explain what allocation method was used.

⁶ UNE revenues include revenues from ILECS, CLECS and DLECS/Data Service Providers ordering UNEs from your company.

⁷ Other revenues consists of items which are neither local, intraLATA toll, interLATA toll, access, nor UNE revenues. Please detail what items you have included in other revenues in item I.G below.

⁸ Total operating revenues will be calculated automatically by summing the local, intraLATA toll, interLATA toll, access, UNE, and other revenues that your company entered above.

II. CLEC --Digital Subscriber Lines

	As of 6/30/02
1 Facilities Based Loops ⁹	
2) UNE xDSL Loops ¹⁰	
3) Line Shared Loops ¹⁰	
4) Resale	

3) Total number of DSL lines	

⁹ Self-provisioned DSL lines

¹⁰ Number of DSL lines not facilities based

Wireless Industry Data Request

Please provide the following information.

Section I. Data for Wireless Voice Products and Services

A) Provide California **subscribership information** for your company's wireless voice activities in California:

	Jan. 1 - Dec. 31, 1996	Jan. 1 - Dec. 31, 1997	Jan. 1 - Dec. 31, 1998	Jan. 1 - Dec. 31, 1999	Jan. 1 - Dec. 31, 2000	Jan. 1 - Dec. 31, 2001	Jan. 1 - June 30, 2002
Total Number of Residential Subscribers							
Total Number of Business Subscribers							
Total Number of Subscribers (See Note 1)	0	0	0	0	0	0	0

Note 1: The total number of subscribers is automatically calculated from the sum of residential and business subscribers your company enters above.

B) Provide the following **intrastate revenue data** for your company's wireless voice activities in California:

	Jan. 1 - Dec. 31, 1996	Jan. 1 - Dec. 31, 1997	Jan. 1 - Dec. 31, 1998	Jan. 1 - Dec. 31, 1999	Jan. 1 - Dec. 31, 2000	Jan. 1 - Dec. 31, 2001	Jan. 1 - June 30, 2002
Residential Revenues							
Business Revenues							
Other Revenues (See Note 2)							
Total Operating Revenues (See Note 3)	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Note 2: Other revenues consists items which are neither residential nor business revenues.

Note 3: Total operating revenues will be calculated automatically by summing the residential, business, and other revenues your company enters above.

C) Please indicate which types of **geographic areas** of California your company currently does wireless voice business in and the relative percentage in each.

Urban/ High Population
Density Areas _____

Rural/ Low Population
Density Areas _____

D) If your company does not currently provide wireless voice service to rural/ low population density areas of California, does your company have **plans to do business in those areas?** [Check only one.]

Yes _____ (If Yes, go to question E below.)
No _____ (If No, skip to question F.)

E) When does your company plan to begin offering wireless voice services within rural/low population density areas of California? [Check only one.]

0 to 6 months _____

6 to 12 months _____

12 to 18 months _____

18 to 24 months _____

F) Please indicate which California **regions (by zip code)** your customers are located in.
Note: Use additional lines or sheets as needed.]

<u>Zip Code</u>	<u>Percent Residential Customers</u>	<u>Percent Business Customers</u>
_____	_____ %	_____ %
_____	_____ %	_____ %
_____	_____ %	_____ %

G) Please indicate and describe areas within **zip codes where your wireless voice signals do not reach** because of the terrain, buildings, or similar obstacles. *(Please provide Service Coverage Maps even if they do not illustrate coverage at the level of zip codes.)*

Section II. Advanced Services -- Fixed Wireless Broadband

A) Does your company **offer fixed wireless service** to customers?

Yes _____ [If Yes, go to question B below and continue.]

No, we have no plans to. _____ [Skip to Section III.]

No, but we are planning to. _____ [Skip to Section III.]

B) Describe your company's **fixed wireless products/services**, associated **target audiences**, and **prices**.

Product/Service #1:

Target Audience(s):

Prices:

Product/Service #2:

Target Audience(s):

Prices:

Product/Service #3:

Target Audience(s):

Prices:

Product/Service #4:

Target Audience(s):

Prices:

C) Provide data on **fixed wireless customer subscribership** for California for the specified time period.

	Jan. 1 - Dec. 31, 1996	Jan. 1 - Dec. 31, 1997	Jan. 1 - Dec. 31, 1998	Jan. 1 - Dec. 31, 1999	Jan. 1 - Dec. 31, 2000	Jan. 1 - Dec. 31, 2001	Jan. 1 - June 30, 2002
Total number of Residential, fixed wireless subscribers							
Total number of Business, fixed wireless subscribers							
Total number of fixed wireless subscribers (See Note 4)							

Note 4: The total number of fixed wireless subscribers is automatically calculated from the sum of residential and business, fixed wireless subscribers your company enters above.

D) Provide the following **fixed wireless revenue data** for your company for California:

	Jan. 1 - Dec. 31, 1996	Jan. 1 - Dec. 31, 1997	Jan. 1 - Dec. 31, 1998	Jan. 1 - Dec. 31, 1999	Jan. 1 - Dec. 31, 2000	Jan. 1 - Dec. 31, 2001	Jan. 1 - June 30, 2002
Residential revenues							
Business revenues							
Other revenues (See Note 5)							
Total operating revenues (See Note 6)							

Note 5: Other revenues consists items which are neither residential nor business revenues.

Note 6: Total operating revenues will be calculated automatically by summing the residential, business, and other revenues your company enters above.

E) Please indicate which types of **geographic areas** in California your company currently does fixed wireless business in and the relative percentage of business in each.

Urban/High	Population	Density Areas	_____%	Rural/ Low Population Density Areas	_____%
------------	------------	---------------	--------	---	--------

F) If your company does not currently provide fixed wireless broadband to rural/ low population density areas of California, does your company have **plans to do business in those areas**? [Check only one.]

Yes _____	[If Yes, go to question G below.]
No _____	[If No, skip to question I.]

G) When does your company plan to begin offering fixed wireless broadband services within rural/low population density areas of California? [Check only one.]

0 to 6 months	_____	6 to 12 months	_____
12 to 18 months	_____	18 to 24 months	_____

H) Please indicate which California **regions (by zip code) your fixed wireless broadband customers are located in.** [Use additional lines or sheets as needed.]

<u>Zip Code</u>	<u>Percent Residential Customers</u>	<u>Percent Business Customers</u>
_____	_____ %	_____ %
_____	_____ %	_____ %

I) Please indicate and describe areas within **zip codes where your fixed wireless broadband signals do not reach** because of the terrain, buildings, or similar obstacles.

Section III. Other Advanced Service

A) Does your company offer satellite broadband?

Yes _____

No, we have no plans to. _____

No, but we are planning to. _____

B) Does your company offer any wireless networking services, such as WiFi?

Yes _____

No, we have no plans to. _____

No, but we are planning to. _____

Section IV. Company Contact Information

A) Please provide the following contact information for a staff person(s) that the CPUC can contact if there are any questions regarding the your response to this data request.

Company Name	
Contact Name(s)	
Contact Address	
Telephone Number	
Email address	

Cable Industry Data Request

1. Identify each of your franchising areas and the associated franchising authority, as well as contact information for that authority.
2. Provide the number of housing units in each franchising area, as well as how that number is determined.
3. For each franchising area, provide the number of residential customers capable of subscribing to the following service scenarios:
 - a) Cable TV only
 - b) Cable modem only
 - c) Cable telephony only
 - d) Cable TV and cable modem
 - e) Cable TV and cable telephony
 - f) Cable TV, cable modem and cable telephony
 - g) Cable modem and cable telephony
4. For each franchising area, provide the number of residential customers currently subscribing to the following service scenarios:
 - a) Cable TV only
 - b) Cable modem only
 - c) Cable telephony only
 - d) Cable TV and cable modem
 - e) Cable TV and cable telephony
 - f) Cable TV, cable modem and cable telephony
 - g) Cable modem and cable telephony
5. Provide the number of possible business customers in each franchising area, as well as how that number is determined.

6. For each franchising area, provide the number of business customers capable of subscribing to the following service scenarios:
 - a) Cable TV only
 - b) Cable modem only
 - c) Cable telephony only
 - d) Cable TV and cable modem
 - e) Cable TV and cable telephony
 - f) Cable TV, cable modem and cable telephony
 - g) Cable modem and cable telephony
7. For each franchising area, provide the number of business customers currently subscribing to the following service scenarios:
 - a) Cable TV only
 - b) Cable modem only
 - c) Cable telephony only
 - d) Cable TV and cable modem
 - e) Cable TV and cable telephony
 - f) Cable TV, cable modem and cable telephony
 - g) Cable modem and cable telephony
8. Provide descriptions and rate information for all cable modem and cable telephony service-offerings in each franchising area, including offerings provided on a stand-alone basis and those bundled with cable television service.
9. Provide digitized graphic representation files (e.g. GIS) of your service coverage areas and indicate the areas in which you provide analog cable, digital cable, cable modem and/or cable telephony.
10. For areas not currently capable of receiving cable modem services, provide your best forecast or estimate of when you will be able to provide them cable modem service.
11. Provide the total mileages of your coax cable plant by franchise area and distinguish between two-way and one-way capable coax cable.
12. Provide the total mileages of your fiber cable plant by franchising area.
13. Provide the number of headends for each franchising area.

DSL Data Request

1. Provide a list of all central offices, associated remote terminals, controlled environmental vaults and huts. The information should include common language location identifier (CLLI), metropolitan serving area, physical address and zipcode; as well as V&H coordinates (e.g. LERG type of information).
2. Provide a list of all above ground remote terminals and huts, including all below ground controlled environmental vaults installed by year from 1990 to the present, by size (e.g. 6' x 9', 10' x 16', 16' x 24', etc.) The information should include the associated central office and metropolitan serving area.
3. Provide manufacturer, type and model for each next generation digital loop carrier (NGDLC) and digital loop carrier (DLC) installed in each remote terminal, controlled environmental vaults and hut with associated central office. Include the number of DSL customers served for each location and include 5 year forecasted line card and channel bank growth, distinguishing between voice and data.
4. Provide quantity of digital subscriber-line asynchronous multiplexer (DSLAMs) installed and associated forecasted growth by chassis or line card per year for the next 5 years per central office. Include manufacturer, type and model as well as total and utilized ports.
5. Provide a list of all ATM/IP switches installed by central office. The information should include manufacturer, model, and type of switch. Include forecasted growth per year for the next 5 years.
6. Provide a list that shows the location of each Internet gateway router in your footprint.
7. Provide GIS compatible information on fiber network and Sonet rings that is used to transport DSL data within your footprint.
8. Provide the quantity of retail DSL (separate out line sharing from second line), ISDN, and T1 connections for each central office that you provide and the quantity of your competitors' DSL, ISDN, and T1 connections for each central office.
9. Provide a description of the types of data services you provide to small, medium, large business customers by central office. Include your definition of small, medium, large, and enterprise customer.
10. Provide the total number of residential households and business customers you service for voice in California sorted by central office. Include your definition of "household".
11. Provide the number of households capable of receiving central office DSLAM based DSL service and the number of actual central office based DSL customers by central office.
12. Provide the number of households capable of receiving project pronto DSL service and the number of actual project pronto customers by central office.
13. Provide the number of households within 12 Kft. of the central office and the number of households beyond 12 Kft., by central office.
14. Please provide a GIS file that delineates the areas within your service area that are capable of receiving xDSL service.

Broadband Cost Data Request

DEFINITIONS:

'Documents' refers to all writing or records of every type in your possession, control or custody, including, but not limited to: testimony, presentations and exhibits (before the CPUC, FCC, State Legislature, Venture Capitalists or Investment Banks), memoranda, correspondence, letters, reports (including drafts, preliminary, intermediate, and final reports), surveys, written analyses, studies, summaries, pamphlets, books, charts, tabulations, notes, photographs, maps, bulletins, diaries, transcripts, microfilm, microfiche, computer data, e-mails, computer files, computer tapes, computer inputs, computer outputs and printouts, accounting statements, workpapers, engineering diagrams, speeches, and all other records in the last three years. This definition also includes any attachments or appendices to a document.

'Broadband Product and/or Service' – A descriptive term for evolving digital technologies that provide consumers with integrated access to voice, high-speed data service, video-demand services and interactive delivery services. (eg. DSL, Cable, fixed wireless, satellite etc.)

NOTE: These services could be both interstate as well as intrastate services. Unlike FCC's definition, this definition does not presume a threshold speed (such as 200kbps in each direction). Hence 'broadband services' for the purposes of this data request may include services that provide voice, data and video service at speeds lower than 200kbps but that are represented as 'broadband services' by your company to your customers.

QUESTIONS

15. Please provide a list of all broadband products and services (such as ATM service, DSL service, Frame-relay service etc.) that your company can provide to businesses and residences in California. Please indicate whether the services can be provided on a line-sharing basis, whether they are tariffed at the CPUC, whether they are interstate or intrastate tariffs and any other characteristics of the service. Please provide the data in an excel spreadsheet and in the format specified in the table below.

Name of the Broadband Product/ Service	Business (B)/ Residence (R)/ or both (B,R)	Do you need to lease/share any lines with the incumbent local carrier to provision this service (Yes/No)	Is it tariffed on an interstate or intrastate basis (InterState /IntraState)	Is a copy of the tariffs filed at the CPUC (Yes/No)	Service Characteristics (eg: Speed in kbps or Mbps)
Service #1					
Service #2					
Service #3					

16. Please provide a list of names, addresses and telephone numbers of Venture Capital, Investment Banking and any other financing firms that you have approached in the past in order to finance the provision of 'broadband services' identified in response to question 1.
17. Please provide copies of Business Plans and Valuations of broadband services and all other 'documents' submitted to either Venture Capital firms or to Investment Banking firms or internally to the Company Board of Directors to raise either debt or equity capital to finance the provision of 'broadband services' identified in response to question 1. If you have already provided any of these 'documents' to the Commission, please indicate the report name and number, proceeding/docket number and filing date.
18. Please state total annual investments in broadband related infrastructure (book value) to date. What proportion of this investment is financed by long-term debt, common equity, preferred stock and short term debt? Please provide this data for each year and each service identified in response to question 1. Please provide the data for each service in an excel spreadsheet and in the format specified in the table below:

Investments for Service #1	Long term Debt (corporate level)	Common Equity (corporate level)	Preferred Equity (corporate level)	Short-term debt (corporate level)	Total Investment (for each service)
Y1996 (historical)					
Y1997 (historical)					
Y1998 (historical)					
Y1999 (historical)					
Y2000 (historical)					
Y2001 (historical)					
Y2002 (forecast)					
Y2003 (forecast)					
Y2004 (forecast)					

19. Please provide revenues, units sold & cash flows (as measured by EBITDA=Earnings before interest, depreciation, amortization and tax), for the past 6 years, earned from each broadband service, as identified in response to question 1, as well as projections for the next 5 years. Please provide the data in an excel spreadsheet and in the format specified in the tables below

Broadband Service	Historical Revenues & Units sold						Forecast Revenues & units sold				
	Y1996	Y1997	Y1998	Y1999	Y2000	Y2001	Y2002	Y2003	Y2004	Y2005	Y2006
Service #1											
Service #2											
Broadband Service	Historical cash flows (EBITDA)						Forecast cash flows (EBITDA)				
	Y1996	Y1997	Y1998	Y1999	Y2000	Y2001	Y2002	Y2003	Y2004	Y2005	Y2006
Service #1											
Service #2											

20. Please describe all the elements that are necessary and sufficient to provision each broadband service, as identified in response to question 1, including and not limited to collocation, loop, transport/backbone, OSS, Maintenance/Repair and marketing/advertising. Which of these elements would you lease (leased elements) from other carriers and which would you build facilities for yourself?
21. For each service and element in the list, as identified in response to question 6, please provide the cost (both recurring and non-recurring of either leasing or setting up the facility). Please provide the data in an excel spreadsheet and in the format specified in the table below. Please provide a reference to the source 'document' where available. Please define and list all the modeling assumptions (such as discount factor and forecast period used to amortize non-recurring costs, scaling factors used, units used, take rates, penetration rates, turnover rates etc.)

Costs of the UNE element lease rate or facilities rate per unit			
Service #1 (eg. Residential DSL)		Average Recurring Costs per unit	Monthly amortized Non-Recurring Costs
Elements leased to provision Service #1	Element #1(UNE Name – eg. HFPL)		
	Element #2		
	Element #3		
Facilities based elements necessary to provision Service #1	Element #1 (Name of the facility)		
	Element #2		
	Element #3		
Service #2 (eg. Frame Relay)		Recurring Costs	Non-Recurring Costs
UNEs.....	Elements		
Facilities.....	Elements		

22. Question 7 above, asks for 'average' recurring and non-recurring costs. It would help us get a better understanding of the distribution of these costs if you provide us with high, low and

medium estimates of these costs. Assuming that there is variation in costs by region, please provide separately high, low and medium (or just high and low) range estimates as presented in the table below. Please also provide an approximate %age of total units that might be deployed/provisioned in regions corresponding to the high, medium, low costs. Please provide the data in an excel spreadsheet and in the format specified in the table below.

Service #1 (eg. Residential DSL)		Recurring Costs per unit	Amortized Non-Recurring Costs per unit	%age of Units deployed or provisioned
Elements leased to provision Service #1	Element #1 (H)	(high estimate)	(high estimate)	
	Element #1 (M)	(med estimate)	(med estimate)	
	Element #1 (L)	(low estimate)	(low estimate)	
Facilities based elements to provision Service #2	Element #1 (H)	(high estimate)	(high estimate)	
	Element #1 (M)	(med estimate)	(med estimate)	
	Element #1 (L)	(low estimate)	(low estimate)	

23. Please provide copies of any costing studies, prepared by you or by a third party and that are available off-the-shelf, for the provision of 'broadband services' identified in response to question 1.

APPENDIX B.

Data Request Respondents

Wireline Data Request Respondents

ILECs

Calaveras
Cal-Ore Telephone
CenturyTel of Eastern Oregon
Citizens - Golden State
Citizens - Tuolumne
Citizens- California
Ducor
Evans
Foresthill
Happy Valley Telephone
Hornitos Telephone
Kerman
Pinnacles
Ponderosa Telephone
Roseville
SBC
Sierra Telephone
Siskiyou Telephone
Verizon California
Verizon West
Volcano
Winterhaven Telephone

CLECs

A.R.C. Networks Inc.
ACC Telecom
Access Point
Adelphia Telecommunications
Affinity Network
Affordable Voice
Allcom
Allegiance
American Farm Bureau, Inc.
American Fiber Network
American Long Lines
AmeriVision
Arrival
ASI
Asian American Association
Astound Broadband
AT&T
Atlas
Bell South Long Distance inc
Big Planet
Broadwing Comm. Services Inc.
Broadwing Telcom.
Business Discount Plan
Business Telcom Inc.
Cal- Long Distance
Cale-Ore LD
Cale-TEL LD
CBC Inc.
Cbeyond Communications
CF Communications
Ciera Networks

Citizens Telecom (IEC)
Claricom
Comcast Business Communic
ComData
COMM SOUTH
Competitive Communication
Comtech 21
Concert Communications Sales
Covad Communications
COX
Cybernet Communications
Dancris
Dial Long Distance
Dialink
Direct One LLC
DPI
DSLnet
EasyLink
Electric Lightwave Inc.
eMeritus Communications
Enhanced Communications Network
Excel Communications
Extelcom
EZ
First World
FOCAL
Fones 4 All Corp.
FoxTel, Inc.
Futur Telecom America
Genesis
Globalcom
GTC
HighSpeed
IDT America
I-Link communications Inc.
Intellicall Operator Services, Inc.
International Plus
Inter-Tel Net Solutions
ITC^DeltaCom
ITS Omnicom
KDD America, Inc.
Legacy Long Distance
Level 3
Longdistance Wholesale Club
Matrix
McLeodUSA
Net One International
NetLojix
Network Communications International
Network Enhanced Technology
New Century Telecom
Norlight Telecom
Norstan Network
NOSVA Limited
NTT Communications

O1 Communications
OLS Inc
One Call Internet
One Star Long Distance
Openpop Com
OPENTEL
Operator Service Co.
Pac West
Paetec Comm
Pinnacles Long Distance
PNG
Primus
QuantumShift
Quick Tel., Inc.
Qwest
Reduced Rate Long Distance
Resort Network Services
RSL COM USA Inc.
Sharenet
SierraTel Long Distance
Siskiyou Long Distance
Smoke Signal Comm.
Sprint Communications Co.
SureWest Broadband
Talk America
TCG
TCN
Teach Comm. Inc.
Teleuno Inc.
Teligent
Toledo Area Telecom. Services, Inc.
Touch Communications
Trans National Communications
United Communications Hub
United States Advanced Network
United States Telesis
Univance
Universal Access
US Telepacific
VarTec Telecom Inc.
Verizon Advanced Data
Verizon Enterprise
Verizon LD
Verizon Select Services
Volcano LD
Vycera Communications Inc.
Working Assets
World Exchange
WorldCom
XO Communications
Xtension Serices, Inc.
Yestel Inc.
Zenex
Z-Tel

Wireless Data Request Respondents

AT&T Wireless
Cal North Cellular
Cingular Wireless
Cricket Communications / Leap Wireless
IrriDigital
San Diego Cellular
Sprint PCS
SureWest Wireless / West Coast Wireless
T-Mobile
Verizon Wireless
Working Assets

Cable Data Request Respondents

Adelphia
AT&T Broadband
Cable America
Cox Communications
NPG Cable
RCN Telecom Services, Inc.
San Simeon Community Cable
Seren Innovations
Time Warner

DSL Data Request Respondents

Calaveras
CAI-Ore Telephone
Century Tel of East Oregon
Citizens (California)
Citizens (golden state)
Citizens (Tuolumne)
Ducor
Evans Telephone
Foresthill
Happy Valley Telephone
Hornitos
Kerman
Pacific Bell & ASI
Pinnacles
Ponderosa
Sierra
Siskiyou
SureWest
Verizon Communications
Verizon West Coast
Volcano
Winterhaven Telephone

Broadband Cost Data Request Respondents

ILECs

Roseville Telephone Company (Surewest Group)
SBC, California, Inc
The Citizens Group, California Inc (Frontier Group)
Verizon California, Inc

ILEC Data Affiliates

Electric Lightwave, Inc (Frontier group)
SBC- ASI, Inc
Surewest Broadband
VADI, Inc.
Verizon Select Services, Inc.

Rural ILECs

The Citizens Golden State Inc. (or Frontier Group)
The Citizens Toulumne California Inc. (or Frontier Group)

CLECs & IECs

360networks (Usa), Inc.
8x8, Inc.
Access Network Services, Inc.
Allegiance Telecom Of California, Inc.
Altrio Communications, Inc.
Apex Telecom, Inc.
At&T Broadband Phone Of California, Llc
At&T Communications Of California, Inc
Brooks Fiber Comms. Of Bakersfield Inc.
(And Of Fresno, Sacramento, San Jose, Stockton)
Covad Communications
Cox California Cable, Llc.
Cox California Telcom Ii, Llc.
Dancris Telecom, Llc
Dslnet Communications, Llc
Highspeed Communications Of California
Intermedia Communications Inc.
Itc-Deltacom (Deltacom Long Distance)
Level 3 Communications, Llc
Mci Worldcom Communications, Inc.
Mci Worldcom Network Services, Inc.
Mercednet, Inc.
Metropolitan Fiber Systems Of Ca. Inc.
Mfs Globenet, Inc
Mpower Communications Corp.
Onestar Long Distance, Inc.
Pac-West Telecommunications, Inc.
Paetec Communications, Inc
Png (Powernetglobal) Telecommunications, Inc.
Qwest Communications Corporation
Qwest Enterprise America, Inc.
Seren Innovations, Inc
Smartcitynetworks, Inc.
Sprint Communications Company, L.P.
Teleconnect Long Distance Svcs & Syste
Tti Telecommunications Inc.
Universal Access, Inc
Us Telepacific Corp (Db a Telepacific Co)

Rural ILECs participating in the NECA (National Exchange Carrier Association) revenue and cost recovery pool for DSL and other advanced data services:

Cal-Ore Telephone Co.
Calaveras Telephone Co.
Evans Telephone Co.
Kerman Telephone Company
Ponderosa Telephone Co.
Sierra Telephone Company, Inc.
Siskiyou Telephone Co.
Volcano Telephone Co.

APPENDIX C.

Telecommunications Glossary

Telecommunications Glossary

3G	<i>Third Generation.</i> Intended to be the next great wireless technology, wideband mobile services and applications offering users faster access to the Web.
Access Revenues	Revenues from Access services.
ADSL	<i>Asymmetric Digital Subscriber Line.</i> DSL service with a larger portion of the capacity devoted to downstream communications, less to upstream. Typically thought of as a residential service.
Advanced Services	Advanced services enable users to send and receive large amounts of information. The FCC defines advanced services as “high-speed, switched, broadband telecommunications that enable users to originate and receive high-quality voice, data, graphics, and video using any technology.”
Bandwidth	The amount of data transmitted in a given amount of time; usually measured in bits per second, kilobits per second, and megabits per second.
Bit	A single unit of data, either a one or a zero. In the world of broadband, bits are used to refer to the amount of transmitted data. A kilobit (kb) is approximately 1000 bits. A megabit (Mb) is approximately 1,000,000 bits.
Broadband	A descriptive term for evolving digital technologies that provide consumers with integrated access to voice, high-speed data service, video-on-demand services, and interactive delivery services. (e.g. DSL, Cable Internet)
Business Access Line	Telephone line from business customer premise to central office. Commonly referred to as local loop.
Cable Modem	A cable modem is a device that enables a user to connect a personal computer to a local cable television line and receive data at a speed of up to 1.5 Mbps and above depending on the cable provider. Cable modem Internet access is shared with other users in the same neighborhood, which reduces the speed as the number of users increases. Cable modem service is offered on the same basic infrastructure as multi-channel video service but it requires equipment upgrades to support broadband connections.
Category 1	Category 1 consists of those services deemed to be basic monopoly services. Prices and charges for services are set or changed only upon Commission approval.
Category 2	Includes discretionary or partially competitive services for which the local exchange carrier retains significant, though declining, market power. Prices and charges for services are set only upon Commission approval.
Category 3	Category 3 consists of fully competitive services. The Commission determines that no Commission oversight of pricing is needed to protect consumers of these competitive services because market forces give rise to pricing efficiency. Upward and downward price flexibility exists, provided certain notice requirements are met.

Cellular	A mobile communications system that uses a combination of radio transmission and conventional telephone switching to permit telephone communication to and from mobile users within a specified area.
Central Office	A circuit switch where the phone lines in a geographical area come together, usually housed in a small building.
CLEC	<i>Competitive Local Exchange Carrier:</i> Wireline service provider that is authorized under state and federal rules to compete with ILECs to provide local telephone service. CLECs provide telephone services in one of three ways or a combination thereof: a) by building or rebuilding telecommunications facilities of their own, b) by leasing capacity from another local telephone company (typically an ILEC) and reselling it and c) by leasing discrete parts of the ILEC network referred to as UNEs.
Coaxial Cable	A type of cable that can carry large amounts of bandwidth over long distances. Cable TV and cable modem service both utilize this cable
Competitive Access Provider (CAP)	(CAP, or "Bypass Carrier") A company that provides network links between the customer and the Inter-Exchange Carrier or even directly to the Internet Service Provider. CAPs operate private networks independent of Local Exchange Carriers.
CPCN	<i>Certificate of Public Convenience and Necessity.</i> Authorization given by the CPUC to telecommunications carriers in order to provide service in the state of California.
CPUC	<i>California Public Utilities Commission</i>
Customer Share	Customer share is the portion of all customers a company has. It is measured by subscribership, lines and/or telephone numbers.
DLEC	<i>Data Local Exchange Carrier:</i> DLECs deliver high-speed access to the Internet, not voice. DLECs include Covad, NorthPoint and Rhythms.
Downstream	Data flowing from the Internet to a computer (Surfing the net, getting E-mail, downloading a file).
DSL	<i>Digital Subscriber Line</i> DSL delivers data at high speeds over ordinary copper telephone lines. DSL can carry both voice and data signals. DSL is distance-restricted, capable of providing services to customers up to 18,000 feet away.
DSL lite	Also known as G.lite, this is a version of ADSL that uploads and downloads at speeds that are among the slower of the implementations.
FCC	<i>Federal Communications Commission</i>

Fixed Wireless	Fixed wireless broadband technology uses an antenna placed on or in a building to send and receive data. The data is transmitted to and from the building via a city's wireless network, which consists of antenna towers placed three to five miles apart. If a home or building isn't in a city with wireless service, the occupants won't be able to get fixed wireless broadband. Wireless speeds are currently comparable to ADSL; however, the theoretical maximum is much higher. Wireless is also an always-on connection that doesn't tie up the phone line. Wireless is a little more expensive than ADSL or cable.
GSM	Global System for Mobile Communication. This is the current radiotelephone standard in Europe and many other countries except Japan and the United States.
IEC	<i>Inter-Exchange Carrier</i> : Typically defined as a long-distance telephone company. IECs provide long distance services to customers between LATAs by using their own facilities or by reselling to their customers the long distance services they have purchased from another carrier.
ILEC	<i>Incumbent Local Exchange Carrier</i> : The traditional wireline telephone service providers within defined geographic areas. Prior to 1996, ILECs operated as monopolies having the exclusive right and responsibility for providing local and local toll telephone service within LATAs. ILECs include regional Bell operating companies such as Pacific Bell/ SBC and non-Bell affiliated companies such as Roseville Telephone Company, both in California.
InterLATA	Between local access and transport areas (LATAs). Services, revenues, and functions associated with telecommunications that originate in one LATA and that terminate in another one or that terminate outside of that LATA. InterLATA services are often thought of as long distance services.
InterLATA Toll Revenues	Revenues attributable to interstate service charges from end-user customers, including presubscribed customers.
IntraLATA	Within the boundaries of a local access and transport area (LATA). IntraLATA services typically include local and local toll services.
IntraLATA Toll Revenues	Revenues attributable to intrastate service charges including presubscribed customers.
IP Telephony	Evolving, packet-based systems that can more efficiently move voice and data traffic simultaneously via the Internet. IP telephony technology represents a lower cost alternative to circuit-switches for providing (mostly residential) local service.
ISDN	<i>Integrated Services Digital Network</i> : An alternative method to simultaneously carry voice, data and other traffic, using the switched telephone network.
ISP	<i>Internet Service Provider</i> : A company providing Internet access to consumers and businesses, acting as a bridge between customer (end-user) and infrastructure owners for dial-up, cable modem and DSL services.
kbps	<i>Kilobits per second</i> : 1000 bits per second. A measure of how fast data can be transmitted.

LATA	<i>Local Access and Transport Area:</i> A geographical area within which a divested Regional Bell Operating Company (RBOC) is permitted to offer exchange telecommunications and exchange access services.
Local Loop	A generic term for the connection between the customer's premises (home, office, etc.) and the provider's serving central office. Historically, this has been a wire connection; however, wireless options are increasingly available for local loop capacity.
Local Residential & Business Revenues	Revenues from basic service, directory assistance, customer calling features, and vertical services.
Market Share of California	Market share for California is the total lines and revenues of 162 carriers comprised of 22 ILECs and 140 CLECs.
Market Share within ILEC's franchise area	Both Pacific and Verizon were compared to CLECs. For this purpose, all 140 CLECs' data was aggregated and compared to the ILECs'. To calculate this percentage the assumption used here was that all the CLECs' revenues and lines are in that one ILECs region, e.g. all 140 CLECs' access lines are within Pacific's territory. This percentage over estimates the amount of CLEC competition but is consistent between Pacific and Verizon.
Mbps	<i>Megabits per second:</i> 1,000,000 bits per second. . A measure of how fast data can be transmitted.
NRF	<p>Adopted in 1989, the New Regulatory Framework (NRF) is the Commission's designation for a price cap form of regulation that is used to regulate California's four largest ILECs (Pacific Bell, Verizon California, Roseville Telephone Company, and Citizens Telephone Company of California). Previously, these ILECs were regulated under traditional cost of service rate of return regulation, which required substantial Commission oversight.</p> <p>The NRF relies on a profit incentive to motivate utilities to operate in the most efficient way possible in order to maximize revenues. Under price caps, the price of utility services are delinked from costs. The utility is allowed to earn a higher rate of return than under rate of return regulation to provide the profit incentive.</p>
Number Porting	Number porting allows customers to switch between telephone service providers while retaining their original telephone number. Also called Local Number Portability (LNP).
Other Access Line	Facilities used to provide wireline telecommunications service that are neither residential nor business access lines. Example: Coin lines and non-switched access lines.
Other Revenues	Revenue which are neither local, intraLATA toll, interLATA toll, access, nor UNE. Example of other revenues are: Billing and Collection, COPT, COIN, Customer Premise Equipment, Directory, Regulatory and Settlements, Resale, Uncollectables, CHCF-A&B, Universal Service Payments.

Paging	A one-way communications service from a base station to mobile or fixed receivers that provide signaling or information transfer by such means as tone, tone-voice, tactile, and optical readout. Two-way paging allows the user to send data as well as receive it. In some cases, a two-way pager can serve as an alternative to a cellular telephone.
PCS	<i>Personal Communications Service.</i> A low-powered, high frequency (1.9 GHz) alternative to traditional cellular service, including CDMA and GSM.
PDA	<i>Personal Digital Assistant.</i> A handheld device that combines computing, telephone/fax, Internet and networking features. A typical PDA can function as a cellular phone, fax sender, Web browser and personal organizer. http://www.webopedia.com/TERM/P/PDA.html
POTS	<i>"Plain Old Telephone Service."</i> Basic telephone service, including dial tone, the ability to place and receive voice/data calls over the same basic lines.
PSTN	<i>Public Switched Telephone Network.</i> See "Switched Network"
RBOC	<i>Regional Bell Operating Company.</i> A telecommunications carrier created to provide local service after the divestiture of AT&T in 1984. While there were initially 7 RBOCs created 1984, due to mergers there are now four: BellSouth, SBC, US West/Qwest, Verizon.
Resale	The practice of carriers purchasing of telecommunications services from another carrier at wholesale rates and, then, reselling those services to their own customers at retail rates.
Residential Access Line	Telephone line from residential customer premise to central office. Commonly referred to as local loop.
RTU	<i>Remote Terminal Unit.</i> The location at which there is a transition between a telecommunications carrier facility and the local lines serving the individual customers
Satellite Broadband	Satellite broadband uses a 24"x36" dish mounted on or near a house or building to send and receive data from satellites orbiting 22,300 miles above the Earth. The dish must have a clear, unobstructed view of the southern sky. Two standard coaxial cables connect the satellite dish antenna to a PC or a StarBand satellite modem. The antenna both sends requests to the Internet and receives Internet content via the satellite. Because this service is available immediately in most location, satellite broadband is a good option in places where cable modem and DSL connections are not available, particularly rural areas.
Section 271	Section 271 of the 1996 Telecommunications Act allows certain Regional Bell Operating Companies (RBOCs[1]) to enter the long distance market after they each prove that they have opened their respective local markets to competition.

Subscribership	Subscribership is how many customers have subscribed for a particular telecommunications service.
Switched Network	A domestic telecommunications network usually accessed by telephones, key telephone systems, private branch exchange trunks, and data arrangements. (Also PSTN – Public Switched Telephone Network)
TA'96	<i>The Telecommunications Act of 1996:</i> TA '96 gives the FCC general rulemaking authority to set the ground rules and policies for local competition. It also assigns states the responsibility for implementing many of the statutory and federal regulatory requirements of the Act, either jointly with the FCC or on their own.
TD	The <i>Telecommunications Division</i> of the California Public Utilities Commission
Total # of Access Lines	Sum of Residential + Business + Other Access lines.
Total Operating Revenues	Sum of Local, IntraLATA toll, InterLATA toll, UNE, and Other revenues.
Unbundling	The term used to describe the access provided by local exchange carriers so that other service providers can buy or lease portions of its network elements, such as interconnection loops, to serve subscribers.
UNE	<i>Unbundled Network Elements:</i> Leased portions of a carrier's (typically an ILEC's) network used by another carrier to provide service to customers.
UNE Revenues	Revenues received from carriers for unbundled network elements.
UNE-P	<i>Unbundled Network Element Platform</i> , or UNE-P, refers to the combination of infrastructure elements - including unbundled loops, switches, and transport elements - that CLECs must acquire to provide local telephone service to customers. By reducing the cost and time of provisioning service, UNE-P enables CLECs to provide local service in regions normally serviced by ILECs. A CLEC utilizing a UNE-P does not have to lease space in the ILEC central office but instead leases the network elements necessary to provide service from the ILEC. The UNE-P CLEC usually leases a copper loop, a port on the ILEC switch, and a connection to the CLEC's point-of-presence.(FCC 01-361a1 1st Triennial Review, mimeo p22.).
Upstream	Data flowing from your computer to the Internet (sending E-mail, uploading a file).
Wireless	Telephone service transmitted via cellular, PCS, satellite, or other technologies that do not require the telephone to be connected to a land-based line.
Wireless Internet	1) Internet applications and access using mobile devices such as cell phones and palm devices. 2) Broadband Internet service provided via wireless connection, such as satellite or tower transmitters. (Also Wireless Broadband)

Wireline

Service based on infrastructure on or near the ground, such as copper telephone wires or coaxial cable underground or on telephone poles.